STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

In the Matter of: ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION 2081 Bay Road East Palo Alto, California 94303-1316 EPA ID: CAD 009 452 657 Respondent.	Docket HWCA P2-04/05-004 CONSENT ORDER Health and Safety Code Section 25187

INTRODUCTION

The California Department of Toxic Substances Control (Department) and ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION (Respondent) enter into this Consent Order (Order) and agree as follows:

1.1. Site. Respondent generates, handles, treats, and/or stores hazardous waste at the following site: 2081 Bay Road, East Palo Alto, California (Site).

1.2. Inspection. The Department inspected the Site on six occasions between October, 1999, and June, 2004.

1.3. Permit/Interim Status. DTSC issued Romic a five year California Hazardous Waste Facility Permit ("HWFP") on or about May 21, 1986. Romic's HWFP was modified by DTSC on or about July 23, 1990, and again modified on or about March 23, 2000, and August 1, 2000. DTSC has allowed Romic to continue to operate under its expired modified HWFP while Romic undergoes DTSC's permit renewal process.

1.4. Jurisdiction. Health and Safety Code section 25187, authorizes the

Department to order action necessary to correct violations and assess a penalty when the Department determines that any person has violated specified provisions of the Health and Safety Code or any permit, rule, regulation, standard, or requirement issued or adopted pursuant thereto.

1.5. Dispute. A dispute exists regarding the violations alleged below. The parties wish to avoid the expense of litigation and to ensure prompt compliance with the statutes and/or regulations cited herein.

VIOLATIONS ALLEGED

2. The Department alleges the following violations:

2.1. Respondent violated Health and Safety Code section 25202, subdivision (a), California Code of Regulations, title 22, section 66270.30, subdivision (a), HWFP, sections II B and III C, subdivision (1) (a), in that Respondent stored corrosive wastes in an area only permitted for solvent wastes:

(a) On or about July 5, 2001, Respondent stored one drum of corrosive hazardous waste in Drum Sampling Area.

(b) On or about July 20, 2001, Respondent stored two drums of corrosive waste in the Drum Sampling Area.

2.2. Respondent violated Health and Safety Code section 25202, subdivision (a), California Code of Regulations, title 22, section 66270.30, subdivision (a), and HWFP, section II, subdivision (B), as set forth below.

(a) Respondent stored hazardous waste in Tanker T-17, an unauthorized container in an unauthorized area on the following dates:

(1) On or about June 29, 2001, through on or about August 18, 2001;

and,

(2) On or about June 17, 2003, through on or about June 23, 2003.

(b) Respondent stored hazardous waste in the Magirus Tanker, an unauthorized container in an unauthorized area on the following dates:

(1) On or about July 5, 2001;

(2) On or about July 17, 2001; and,

(3) On or about July 23, 2001.

(c) On or about June 29, 2001, through on or about August 15, 2001, Respondent stored hazardous waste in Tanker T-4, an unauthorized container in an unauthorized area.

(d) On or about July 2, 2001, through August 7, 2001, Respondent stored hazardous waste in Tanker BT-1, an unauthorized container in an unauthorized area.

(e) On or about June 29, 2001, through October 4, 2001, Respondent stored hazardous waste in Tanker T-10, an unauthorized container in an unauthorized area.

(f) On or about June 29, 2001, through August 7, 2001, Respondent stored hazardous waste in Tanker T-12, an unauthorized container in an unauthorized area.

(g) On or about December 20, 2000, through January 2, 2001, Respondent stored hazardous waste in Tanker T-9, an unauthorized container in an unauthorized area.

2.3. Respondent violated Health and Safety Code, section 25202, subdivision

(a), California Code of Regulations, title 22, sections 66270.30, subdivision (a), and 66270.42, and HWFP, section II, subdivision (G)(10), as set forth below.

(a) On or about January 9, 1992, Respondent modified the permitted Liquefaction Unit without the Department's prior approval;

(b) On or about February 3, 1997, Respondent further modified the permitted Liquefaction Unit without the Department's prior approval.

SCHEDULE FOR COMPLIANCE

3. Respondent shall comply with the following:

3.1.1. The terms and conditions of the Order remain in effect until a decision is made by the Department on Respondent's HWFP renewal application.

a. If a decision is made by the Department to issue Respondent a hazardous waste facility permit, the terms and conditions of the Order terminate upon the effective date of the new hazardous waste facility permit.

b. If a final decision is made by the Department to deny Respondent a hazardous waste permit and all applicable rights of appeal have been exhausted:

i. The terms and conditions of this Order shall terminate immediately on the effective date of the final denial; and,

ii. Respondent shall immediately cease operations of the units and activities authorized by this agreement; and,

iii. Respondent shall, within 10 days of the effective date of the final denial, submit a closure plan developed in accordance with the California Code of Regulations, title 22, section 66264.110, for units and activities covered by the current permit, and section 66265.110 for the units and

activities covered by this Order.

c. Neither the existence of this Order or the terms and conditions of this Order shall have any bearing on any subsequent permit decision by the Department.

3.1.2. In case of a conflict between the Order and the attached Respondent protocols, the most restrictive condition shall prevail.

3.1.3. Respondent shall follow procedures identified in the attached document entitled “Storage of Various Waste Types in Sampling Area” dated as revised August 1, 2002, and August 10 and 30, 2004, (Attachment A, incorporated herein by this reference). Any deviation from the procedures described in Attachment A without prior approval in writing from the Department shall constitute a violation of the Order and may be grounds for termination of this Order. Except as expressly set forth herein, Attachment A does not supercede procedures contained in Respondent’s approved RCRA Part B Permit dated August 30, 1989, July 23, 1990, and March 23, 2000.

a. Respondent shall unload and segregate containers from incoming vehicles by compatibility into the Sampling Area.

b. Respondent shall manage ignitable and incompatible liquid and solid wastes in the Sampling Area, in accordance with California Code of Regulations, title 22, sections 66264.17 and 66264.177, subdivision (c).

i. Respondent may elect to use containment pallets to separate incompatible wastes.

ii. Respondent shall not place incompatible solid or liquid hazardous wastes within the same containment pallet.

c. Respondent may screen or sample corrosive wastes within the West Storage

Building #1. Respondent shall not conduct any screening or sampling activities outside of the West Storage Building #1 or the Sampling Area.

d. No incompatible wastes shall be placed in Row 80 of the Sampling Area or the West Storage Building #1 unless separated in accordance with standards identified in California Code of Regulations, title 22, sections 66264.17 and 66264.177, subdivision (c).

e. Respondent shall only store acids and base waste types in West Storage Building #1 as specified in Table 1 of Respondent's HWFP, modified version date of March 23, 2000.

f. Respondent shall not stack containers in the Sampling Area, except for containers of five gallon or less in capacity that may be stacked no more than two high.

g. Respondent shall not store any wastes in the Sampling Area longer than 144 hours.

h. Respondent shall maintain a 36-inch aisle space between double rows of pallets or between rows of single pallets for all wastes stored in the Sampling Area. Respondent shall maintain a 36-inch aisle space between pallets and the walls of the Sampling Area.

i. Respondent shall conduct daily inspections in the Sampling Area in accordance with Respondent's HWFP, modified version dated March 23, 2000.

j. Respondent shall operate the Sampling Area in accordance with the maximum design capacity specified in Attachment A. All containers shall be presumed to be full for determinations of compliance with permitted capacity limitations.

3.1.4. Respondent shall follow procedures identified in the attached document entitled “Intra-Plant Transfers via Tanker Truck”, dated as revised September 13, 2004 and October 12, 2004, (Attachment B, incorporated herein by this reference). Any deviation from the procedures without prior approval in writing from the Department shall constitute a violation of the Order and may be grounds for termination of the order.

a. Intra-plant transfers are expressly limited to the activities and waste streams identified in Attachment B.

b. Respondent shall use U.S. Department of Transportation certified vehicles for all intra-plant transfers made via tank trucks and tanker trailers. Respondent is prohibited from using non-Respondent owned tanker trailers or tank trucks owned by third parties but operated under contract by Respondent for activities identified in Attachment B.

c. Respondent must conduct all transfer activities to and from tank trucks and tanker trailers within appropriate secondary containment. Respondent must devise an appropriate secondary containment system that will fully contain all transfer activities, including the vehicle and all associated piping and connections such that the secondary containment can hold the full volume of the transfer vehicle.

d. Respondent shall restrict the use of the 1700-gallon polyethylene tank in the Truck Wash System to the receipt of and management of wastewaters or rinse waters generated from the rinsing of tanker trailers, tank trucks, intra-plant transfer vehicles and containers that are “empty” in accordance with California Code of Regulations, title 22, section 66261.7. The 1700-gallon polyethylene

tank in the Truck Wash System shall not be used to manage rinse water, wastewater, or contact water from authorized units that previously held off-site generated wastes.

e. Respondent shall not transfer off-site hazardous waste received in a tanker trailer or tank truck at the time of acceptance at the facility to any Respondent vehicle for intra-plant transfer use as defined in Attachment B.

f. Respondent shall not hold any waste in a tank truck or tanker trailer for intra-plant transfer in excess of 24 hours. The 24-hour clock begins with the placement of the first drop of waste into the tank truck or tanker trailer. Waste held in excess of 24 hours in a tank truck or tanker truck is considered unauthorized storage of hazardous waste and may be grounds for termination of this Order.

g. Respondent shall conduct inspections of all vehicles, including gauges, pumps, hoses, and lines used for intra-plant transfer on a daily basis while each vehicle is in use. Inspections shall be recorded in a manner consistent with California Code of Regulations, title 22, section 66265.15 and as noted in Attachment B to this Order.

h. Respondent shall track the disposition of all wastes, including compatibility assessments, transferred via intra-plant transfer as part of the Respondent's HWFP operating record.

3.1.5. Respondent shall operate the Liquefaction Unit in accordance with modifications submitted in attached documents entitled "Liquefaction System Changes," dated as revised September 8, 2004, (Attachment C, incorporated herein by this

reference).

a. Replace the 1992 Piping and Instrumentation Diagram (PID) P061, dated January 9, 1992 with the PID Drawing No. E-8a, dated February 24, 1997 revision 3 (12-2003) as contained in Attachment C;

b. Replace the Solids/Liquids Separation Process Flow Diagram dated June 8, 1989 with the Liquefaction Flow Diagram E-8, dated July 26, 2001, as contained in Attachment C.

c. Replace the description of the unit on pages XIV-7 and XIV-8 of the approved operation plan with the revision date of September 21, 1989 with new pages XIV-7, 7a, 7b, 7c, 7d, and XIV-8, as contained in Attachment C; and

d. Document the replacement of the blended product tank (1,000 gallon tank with Cowles Dissolver, a single shaft mixer) with the current product tank PT-1 with the capacity of 1,160 gallons.

e. Document the Liquefaction VOC system modernization based on the Shredder & Liquefaction VOC System Modernization Drawing No. E-8b PID dated February 3, 1999 revision no. 7 (12-03), as contained in Attachment C. Notwithstanding the name of the VOC System Modernization Drawing, this order does not approve the use of the Debris Shredder System.

3.1.6. Any modifications made to the Liquefaction Unit outside of those described in the previous paragraph without prior approval in writing from the Department shall constitute a violation of the Order and may be grounds for termination of the Order.

3.2. Submittals. All submittals from Respondent pursuant to this Order shall be

sent to:

Patricia Barni, Section Chief
Statewide Compliance Division
Department of Toxic Substances Control
700 Heinz Avenue, Suite 210
Berkeley, California 94710-2737

3.3. Communications. All approvals and decisions of the Department made regarding submittals and notifications shall be communicated to Respondent in writing by the Branch Chief, Department of Toxic Substances Control, or his/her designee. No informal advice, guidance, suggestions, or comments by the Department regarding reports, plans, specifications, schedules, or any other writings by Respondent shall be construed to relieve Respondent of its obligation to obtain such formal approvals as may be required.

3.4. Department Review and Approval. If the Department determines that any report, plan, schedule, or other document submitted for approval pursuant to this Order fails to comply with the Order or fails to protect public health or safety or the environment, the Department may return the document to Respondent with recommended changes and a date by which Respondent must submit to the Department a revised document incorporating the recommended changes.

3.5. Compliance with Applicable Laws. Respondent shall carry out this Order in compliance with all local, state, and federal requirements, including but not limited to requirements to obtain permits and to assure worker safety.

3.6. Endangerment during Implementation. In the event that the Department determines that any circumstance or activity (whether or not pursued in compliance with

this Order) creates an imminent or substantial endangerment to the health or welfare of people on the site or in the surrounding area or to the environment, the Department may order Respondent to stop further implementation of this Order for such period of time as needed to abate the endangerment. Any deadline in this Order directly affected by a Stop Work Order under this section shall be extended for the term of such Stop Work Order.

3.7. Liability. Nothing in this Order shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current, or future operations of Respondent, except as provided in this Order. Notwithstanding compliance with the terms of this Order, Respondent may be required to take such further actions as are necessary to protect public health or welfare or the environment.

3.8. Site Access. Access to the Site shall be provided at all reasonable times to employees, contractors, and consultants of the Department, and any other agency having jurisdiction. Nothing in this Order is intended to limit in any way the right of entry or inspection that any agency may have by operation of any law or otherwise. The Department and its authorized representatives may enter and move freely about all property at the Site at all reasonable times for purposes including but not limited to: inspecting records, operating logs, and contracts relating to the Site; reviewing the progress of Respondent in carrying out the terms of this Order; and conducting such tests as the Department may deem necessary. Respondent shall permit such persons to inspect and copy all records, documents, and other writings, including all sampling and monitoring data, in any way pertaining to work undertaken pursuant to this Order.

3.9. Sampling, Data, and Document Availability.

3.9.1. Respondent shall permit the Department and its authorized representatives to inspect and copy all sampling, testing, monitoring, and other data generated by Respondent or on Respondent's behalf, in any way pertaining to work undertaken pursuant to this Order. Respondent shall allow the Department and its authorized representatives to take duplicates of any samples collected by Respondent pursuant to this Order.

3.9.2. Respondent shall maintain a central depository of the data, reports, and other documents prepared pursuant to this Order. All such data, reports, and other documents shall be preserved by Respondent for a minimum of six years after the conclion of all activities under this Order.

3.9.3. If the Department requests that some or all of these documents be preserved for a longer period of time, Respondent shall either comply with that request, deliver the documents to the Department, or permit the Department to copy the documents prior to destruction.

3.9.4. Respondent shall notify the Department in writing at least six months prior to destroying any documents retained pursuant to this section.

3.10. Government Liabilities. The Department shall not be liable for injuries or damages to persons or property resulting from acts or omissions by Respondent, or related parties specified in paragraph 4.3, in carrying out activities pursuant to this Order, nor shall the Department be held as a party to any contract entered into by Respondent or its agents in carrying out activities pursuant to this Order.

3.11. Incorporation of Plans and Reports. All plans, schedules, and reports that

require Department approval and are submitted by Respondent pursuant to this Order are incorporated in this Order upon approval by the Department.

3.12. Extension Requests. If Respondent is unable to perform any activity or submit any document within the time required under this Order, the Respondent may, prior to expiration of the time, request an extension of time in writing. The extension request shall include a justification for the delay.

3.13. Extension Approvals. If the Department determines that good cause exists for an extension, it will grant the request and specify in writing a new compliance schedule.

OTHER PROVISIONS

4.1. Additional Enforcement Action. By agreeing to this Order, the Department does not waive any right to take further enforcement actions or to impose penalties within its jurisdiction and involving either the Respondent(s) or the Site, except to the extent expressly provided in this Order.

4.2. Penalties for Noncompliance. Failure to comply with the terms of this Order may subject Respondent to civil penalties and/or punitive damages for any costs incurred by the Department or other government agencies as a result of such failure, as provided by Health and Safety Code section 25188, and other applicable provisions of law.

4.3. Parties Bound. This Order shall apply to and be binding upon Respondent and its officers, directors, agents, employees, contractors, consultants, receivers, trustees, successors, and assignees, including but not limited to individuals, partners, and subsidiary and parent corporations, and upon the Department and any successor

agency that may have responsibility for and jurisdiction over the subject matter of this Order.

4.4. Integration. This agreement constitutes the entire agreement between the parties and may not be amended, supplemented, or modified, except by a writing duly executed by the Department and specifically referencing this document by title and docket number, or as otherwise provided in this Order.

4.5. Privileges. Nothing in this Order shall be construed to require any party to waive any privilege, including without limitation, attorney-client and attorney work-product. However, the assertion of any privilege shall not relieve any party of its obligations under this Order.

RIGHT TO A HEARING

5. Respondent waives any right to a hearing in this matter.

EFFECTIVE DATE

6. The effective date of this Order is the date it is signed by the Department.

Dated: 4/1/05

(Original signed by William J. Mitzel)
William J. Mitzel, President
ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION

Dated: 4/6/05

(Original signed by Charlene Williams)
Charlene Williams, Chief
Northern California Branch
Statewide Compliance Division
Department of Toxic Substances Control

Technical Protocol:

Storage Of Various Waste Types In Sampling Area

STORAGE OF VARIOUS WASTE TYPES IN SAMPLING AREA

1.0 THE NEED

The "Sampling Area" is the unit designated by Romic as the location where all incoming containerized hazardous wastes are physically received, visually inspected, sampled, and staged while awaiting analytical results. Many trucks come in with mixed loads; for example, a truckload could include both drums of inorganic corrosives and drums of organic solvents. Operationally, it is much more efficient to stage complete loads in the Sampling Area, rather than immediately breaking them up into different storage areas. This procedure is also more protective of the environment because the movement of waste is more streamlined, and because quality control is conducted in only one location.

Romic's Hazardous Waste Facility Permit lists "Solvents" as the waste type to be stored in the (Drum) Sampling Area. DTSC has interpreted this designation to preclude Romic from unloading complete truckloads and conducting subsequent sampling of all waste in this area. Romic seeks relief from the restriction on the waste types to be stored in the Sampling Area. DTSC approval of Romic's permit renewal application will eliminate the need for this relief.

2.0 DESCRIPTION OF PRACTICE

2.1 Sampling Area

The Sampling Area is located just south of, and shares a common roof with, the South Storage Building (see Figure D-1). The "Sampling Area" was designated the "Drum Sampling Area" in the current Part B application and permit. The "South Storage Building" was designated the "South Drum Building" in the current Part B application and permit.

The area is 74 feet by 124 feet and is constructed of reinforced concrete (see attached Drawing D-4). Based on maintaining minimum 36" aisles, the area can store up to 741 55-gallon drums, which can hold 40,755 gallons of waste. The area provides sufficient secondary containment to store 40,755 gallons of waste in containers (see attached Appendix D-1 from Romic's Hazardous Waste Facility Permit renewal application). Containers of capacities other than 55 gallons may be stored in this area; at no time will the inventory of containerized hazardous wastes in the Sampling Area exceed 40,755 gallons.

The Sampling Area has a separately contained isolation area, designated Row 80. Row 80 has a sixteen-inch berm constructed of reinforced concrete. The attached Drawing R-80 depicts this area.

The area's roof and berms prevent run-on into the area. The area is sloped so that liquids drain to a low point in the center of the area. Any liquids that may accumulate in the area are examined. If the source of the liquids can be ascertained and traced to a particular source or single waste stream, that is, the liquid is readily identifiable, the material is collected and managed in a manner appropriate to its characterization. If the liquid is determined to be from multiple waste streams, or is otherwise unidentifiable, a sample is collected and analyzed in the Romic Laboratory. Accumulated liquids, once identified, are pumped, if they are present in sufficient quantity, using portable pumps or vacuum

tankers. If only a small amount is present, it may be absorbed using an appropriate absorbent such as a clay-based absorbent (e.g., "kitty litter") or vermiculite.

No portion of the Sampling Area lies within fifty feet of Romic's property line.

2.2 Waste Types

The waste types to be handled are comprised of all the wastes listed on Romic's Part A application. Romic currently receives an average of about 2,500 containers each month of various types of hazardous waste. Of this approximate number, 1,500 to 2,000 would typically contain organic/organic solvent/solvent-contaminated wastes, 200 to 300 would typically contain inorganic corrosive wastes, and 200 to 300 would typically contain miscellaneous other types of waste. These figures are approximate, and are presented to illustrate the mix of incoming containerized waste, not to set a limit on this activity.

This activity will not result in an increase in the amount of waste stored in this area. Romic's permit imposes a storage limit of 948 55-gallon drum equivalents of hazardous waste in this area at any given time. As noted above, the area can accomodate up to 741 drums in its current configuration.

2.3 Process Description

Incoming trucks bearing containerized hazardous wastes will be unloaded directly into the Sampling Area. Containers will be segregated according to compatibility, and sampled for waste acceptance purposes.

The bulk of the containerized wastes that are seen in the Sampling Area are organic liquids (e.g., solvents, ethylene glycol, oils, fuels), aqueous liquids (e.g., solvent-contaminated water, oil and water, latex paint), and non-reactive, non-corrosive solids (e.g., contaminated PPE, rags and wipes contaminated with solvents, and oil- and solvent-contaminated absorbent). These waste types are generally compatible with each other; containers of these wastes will be staged directly on the floor in the Sampling Area. Potential compatibility concerns identified during the profiling (preacceptance) stage will be taken into account when staging received drums.

The following segregation measures will be implemented for waste types not compatible with the above materials:

WASTE TYPE	SEGREGATION	RATIONALE
Corrosive (D002) acid liquids	Spill containment pallets[1,2]	To maintain physical segregation in case of release from palletized containers or from non-palletized containers
Corrosive (D002) alkaline liquids		
Oxidizers and organic peroxides (D001)		
Corrosive solids (non-RCRA, though in some cases generators overclassify as D002)	Regular pallets	To maintain physical segregation in case of release from non-palletized containers; release from container failure of solid materials is unlikely
Materials listed in Group 2-A or 3-B (except concentrated wastes in Groups 1-A or 1-B) in Appendix V of Chapter 15, Division 4.5, Title 22, California Code of Regulations		

Table Notes

1 Spill containment pallets are described in section 3.2 below. Incompatible wastes will not be stored together on the same spill containment pallet.

2 Containers too large to place on spill containment pallets (e.g., totes, portable tanks) will be placed in Row 80 of the Sampling Area or directly into West Storage Building #1. Incompatible wastes will not be stored together in Row 80 or in West Storage Building #1 unless physical separation (i.e., appropriately sized spill pallet) is provided.

Containers will subsequently be sampled in accordance with Romic's Waste Analysis Plan. All containers will remain in the Sampling Area pending analytical results. After analysis is complete, and any discrepancies have been reconciled with the generator, containers will be assigned a disposition and are moved to storage in other areas of the facility. No more than 144 hours will elapse from the time a container is placed in the Sampling Area until the time that container is moved out of the Sampling Area, pursuant to Table 1 of Romic's Hazardous Waste Facility Permit. Containers placed immediately in the West Storage Building #1 will be sampled in that unit.

Containers greater than five gallons in capacity will be single-stacked. Containers of five gallons or less in capacity may be stacked to maintain efficient use of the space. Such small containers are easily moved by hand in case the need arises.

3.0 CONTROLS

3.1 Prevention of Leaks

Containers will be visually inspected as they are unloaded from transport trucks and as they are moved to and placed in Sampling Area rows. Containers with visible defects deemed to affect structural integrity (e.g., major dents, leaks, missing elements) will be addressed either by repackaging the waste or placing the container itself in a salvage drum.

Containers will be handled appropriately, with proper care, to avoid unnecessary container damage.

3.2 Spill Pallets

Plastic spill containment pallets will be used to provide physical segregation of incompatibles. These spill pallets conform to the Uniform Fire Code (1997) Article 80, Section 8003.1.3.4 requirements. They are designed to contain up to 60 gallons of liquid in case of a container failure. They are constructed of high-density polyethylene.

Romic will effect segregation of incompatibles by placing containers of wastes incompatible with aqueous and organic wastes on spill containment pallets. Materials that are not compatible with each other will be placed on separate spill pallets.

Lab packs will not require placement on spill pallets, as the nature of their packaging provides adequate secondary containment. Lab packs in fiberboard outer packages will be placed on pallets to avoid contact with accumulated or spilled liquids.

Spill pallets do not have sufficient capacity to provide adequate secondary containment for totes or portable tanks. If totes or portable tanks with incompatible wastes are received at Romic, they will not be placed on spill containment pallets. Instead, they will be staged in row 80 of the Sampling Area. If the containers contain corrosive wastes, they may also be moved directly to the appropriate area in the Acid/Base Warehouse (West Storage Building #1).

3.3 144 Hour Time Limit

Containers will be staged in the Sampling Area for a period not to exceed 144 hours (six days), as specified in Table 1 of Romic's Hazardous Waste Facility Permit. This is generally the time period required to complete sampling, waste approval, and disposition confirmation activities. This time limit will assure that these activities are completed in an expeditious manner.

3.4 Storage Limit/Physical Inventory

Romic's current permit imposes a storage limit of 948 55-gallon drum equivalents on this area. As noted above, the area can accommodate up to 741 55-gallon drums in its current configuration. Romic conducts a daily physical count and a weekly electronic inventory of the containers staged in this area to ensure compliance.

3.5 Emergency Preparedness and Contingency Planning

3.5.1 Emergency Preparedness

Romic will maintain 36" aisles (at a minimum) between double rows of drums, in accordance with its current Hazardous Waste Facility Permit. Romic has determined that 36" aisles are more than sufficient to allow access for equipment and personnel to respond to potential problems such as spills, or leaks.

Romic will conduct a documented inspection of the Sampling Area once each operating day. This inspection entails a visual examination for leaking or damaged containers, improper labeling, evidence of spills, and damage to secondary containment. This inspection will cover all containers in storage, the containment floor, walls, and berms, and all loading and unloading areas in the Sampling Area.

3.5.2 Contingency Planning

The staging of various types of waste in the Sampling Area will require minor changes to the facility Contingency Plan. These wastes for which this authorization is requested are already handled by the facility. The Contingency Plan already addresses emergency procedures for incidents involving all of these wastes.

The Contingency Plan does not specify the types of wastes that are located in the various areas of the plant. This is dynamic and ever-changing, and depends upon the wastes received at the facility, outbound shipments, and treatment schedules. The Contingency Plan does require the Emergency Coordinator to be familiar with "the location and characteristics of waste handled," among other aspects of facility operations. The

Emergency Coordinator can acquire this information from container labels, manifests, and the facility's computerized inventory system.

The facility will submit a permit modification request in September to modify its Contingency Plan to add acid neutralizing materials to address potential acid spills (see attached modified page VII-16, with revisions redlined). All other provisions of the Contingency Plan are sufficient to address any incidents that might occur in the Sampling Area with the staging of additional waste types.

3.6 Air Emissions Controls

The containers Romic will store in the Sampling Area will be subject to either Container Level 1 or Container Level 2 controls under 22 CCR 66265.1087. As such, they will be maintained closed unless waste is being removed from (e.g., during sampling) or added to them. No other controls are necessary.

FIGURES

Figure D-1

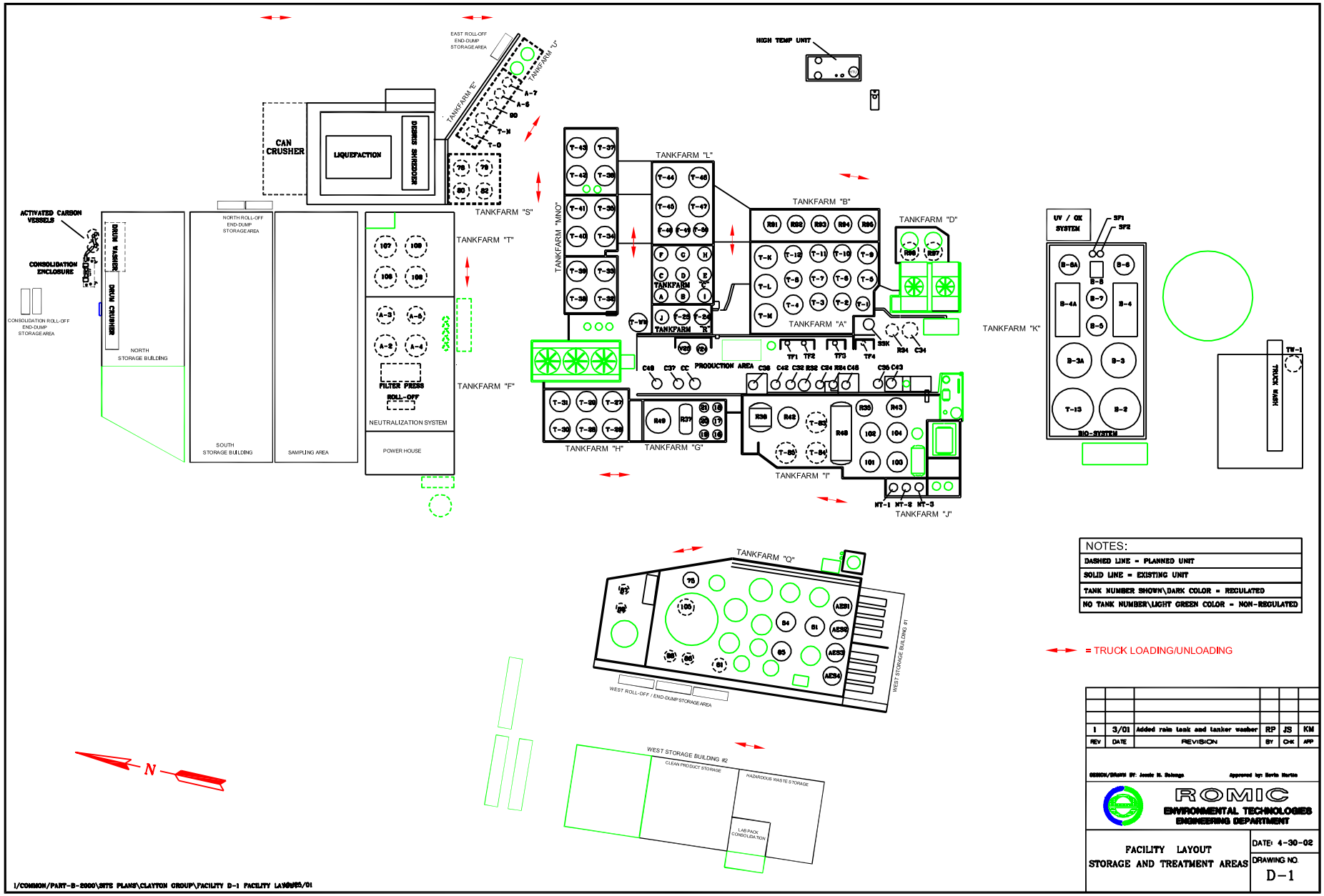
Drawing D-4

Drawing R-80

ATTACHMENTS

Appendix D-1

Revised Operation Plan p. VII-16



NOTES:

DASHED LINE = PLANNED UNIT
SOLID LINE = EXISTING UNIT
TANK NUMBER SHOWN\DARK COLOR = REGULATED
NO TANK NUMBER\LIGHT GREEN COLOR = NON-REGULATED

= TRUCK LOADING/UNLOADING

REV	DATE	REVISION	BY	CK	APP
1	3/01	Added rain tank and tanker washer	RP	JS	KM

DESIGN/DRAWN BY: Jessie M. Quiroga — Approved by: Kevin Martin

ROMIC ENVIRONMENTAL TECHNOLOGIES ENGINEERING DEPARTMENT

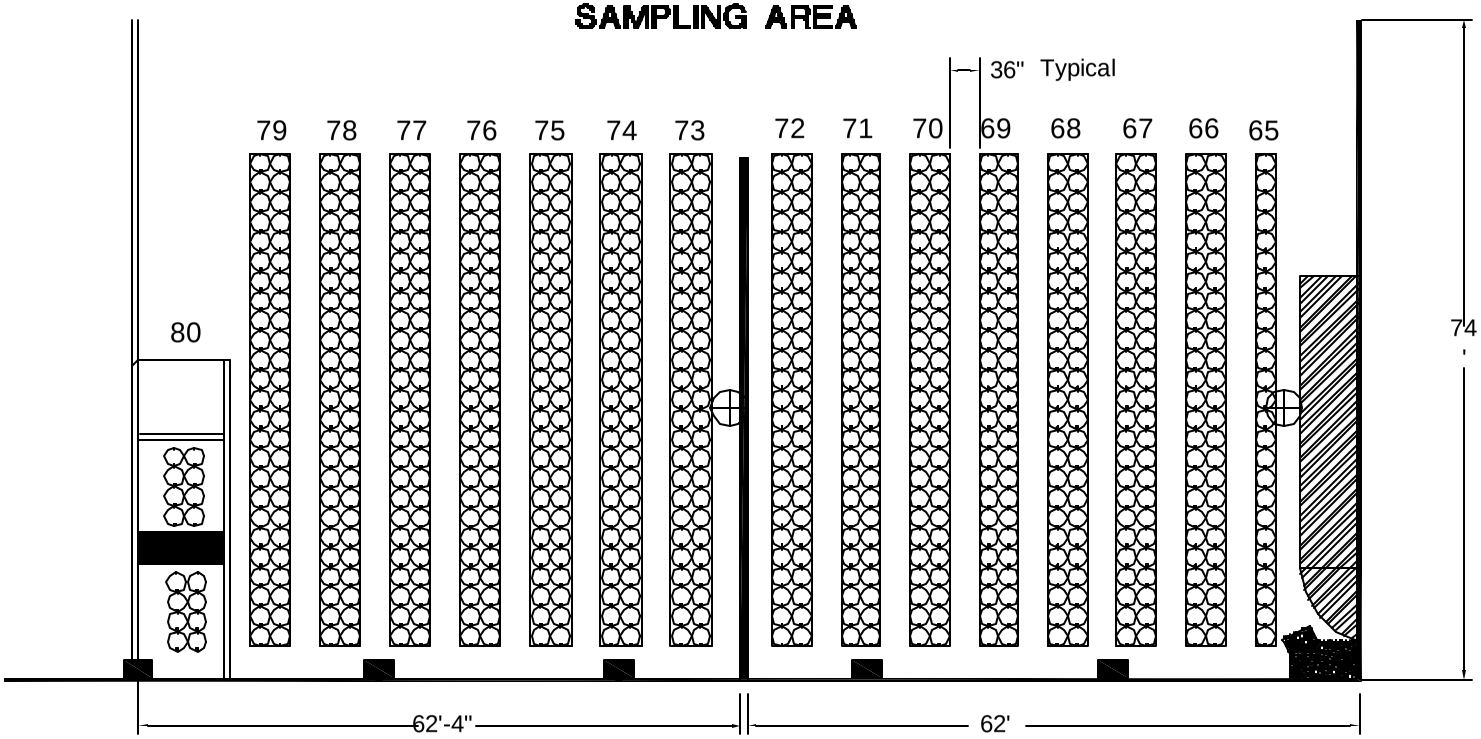
FACILITY LAYOUT
STORAGE AND TREATMENT AREAS

DATE: 4-30-02

DRAWING NO. D-1

I/COMMON/PART-B-2000\SITE PLANS\CLAYTON GROUP\FACILITY D-1 FACILITY LAY00/05/01

SAMPLING AREA



⊕ = LOW POINT

SAMPLING AREA			
		All Drums	
Row #	Row Length	On Floor	Stacked
66-79	50 ft.	50/row	0
65	50 ft.	25	0
80	32 ft.	16	0
TOTAL STORAGE		741 drums on floor	

NOTE: Drum diameter is approximately 2 feet.

R:\ENGINEER\COMMON\PART-BB-2000\CONTAINMENT AREAS\ D-4 36 AISLE REV1

REV	DATE	REVISION	BY
3	8/03	[illegible]	KML
4	6/04	[illegible]	KML
5	4/05	[illegible]	KML
6	10/07	[illegible]	KML
REV	DATE	REVISION	APP

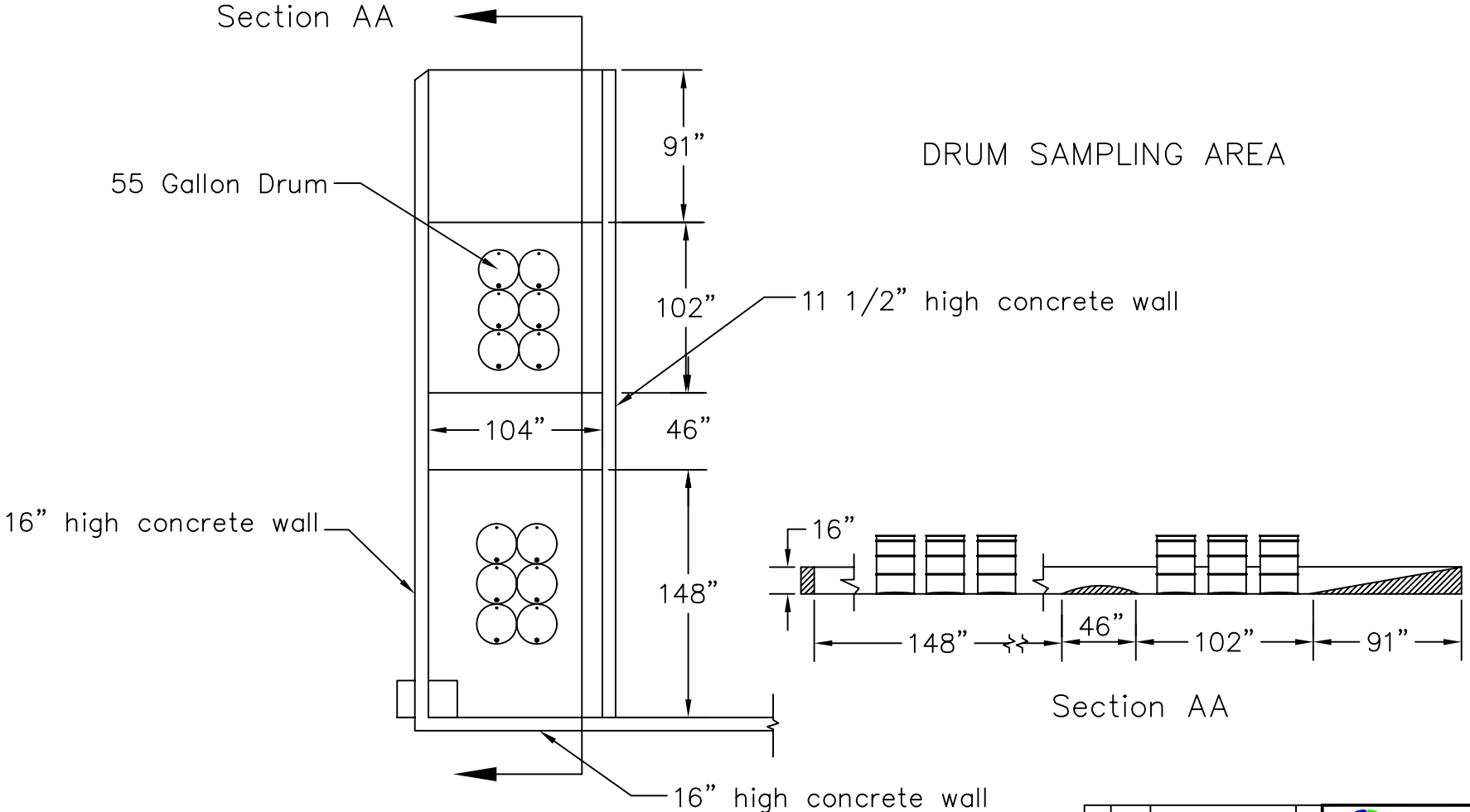
[illegible]

ROMIC
ENVIRONMENTAL TECHNOLOGIES
ENGINEERING DEPARTMENT

SAMPLING AREA
DIMENSIONS AND DRUM
STACKING DIAGRAM
36" AISLES

DATE: 4-17-03

DRAWING NO.
D-4



REV	DATE	REVISION	APP
0	4/03		

DRAWN BY: ROBERT T PIGNATTI

ROMIC
ENVIRONMENTAL TECHNOLOGIES
ENGINEERING DEPARTMENT

ROW 80 DETAIL

DATE: 4-15-03
DRAWING NO. R-80
SHEET 1 OF 1

R:\ENGINEER\COMMON\PART-BB-2000\CONTAINMENT AREAS\ROW 80 DETAIL

APPENDIX D-1

SECONDARY CONTAINMENT CAPACITY ANALYSIS
SAMPLING AREA

Site Conditions

1. Building is covered (allowance for containment of precipitation not necessary)
2. Building dimensions/area: 74 feet x 124 feet = 9,176 square feet
3. Curb Height: approximately 9 inches
4. Gross Containment Volume: 9,176 ft^2 x 9 in x 1 ft/12 in x 7.48 gal/ft^3 = 51,477 gal

Based on minimum 36" aisle space allowance, a total of 741 55-gallon drums (40,755 gals.) can physically fit in the Sampling Area (See Figure D-4). A maximum containerized waste inventory of 40,755 gallons will be stored in the area if containers of other sizes are stored.

Assumptions

1. 55-gallon drums are approximately 22.6 in. in diameter, for an area of 2.79 sq. ft.
2. 350-gallon totes are approximately 4 ft. by 4 ft., and are mounted on pallets or pallet-like structures.
3. Because totes are mounted on pallets, drums will displace more of the gross containment volume.

Displacement

1. A 55-gallon drum has a 2.79 ft^2 footprint.
2. 741 55-gallon drums to be placed on floor (see Figure D-4 36).
3. Volume displaced = 741 x 2.79 ft^2 * 9 in. * 1 ft/12 in * 7.48 gal/ft^3 = 11,598 gal.
4. Containment volume available = Gross containment volume less volume displaced: 51,477 gallons - 11,598 gallons = 39,879 gallons.

UFC Containment Volume Analysis

1. Capacity of largest container: 350 gal.
2. Fire Sprinkler Volume: 9,176 sq. ft. x 0.16 gal/sq. ft./min x 20 min. = 29,363 gal.

Required Containment Volume per UFC: 29,713 gallons. OK

Title 22 Containment Volume Analysis

1. Aggregate capacity of 741 drums: 40,755 gallons.
2. Capacity of largest container is 350 gallons.
3. Secondary containment capacity required is 10% of aggregate storage capacity or 100% of capacity of largest container, whichever is greater.
4. 10% of aggregate capacity is 4,076 gallons.

Required Containment Volume per Title 22: 4,076 gallons. OK

TABLE 7.1 - EMERGENCY EQUIPMENT LIST (cont.)

EMERGENCY EQUIPMENT	LOCATION	OUTLINE OF CAPABILITIES
FIRE EXTINGUISHING SYSTEMS (cont.)		
Fixed 6% AFFF Foam hoses	Drum Storage Building - East and West side	Capable of fighting polar and nonpolar solvent fires
Automatic 6% AFFF Foam System	Production transfer station, Liquefaction area	Capable of extinguishing polar and nonpolar solvent fires.
7 - Fire Hydrants	East and West side of Drum Storage Building, East of Biosystem, on Tara Road - West of Product Tank Farm, NE corner of New Office Bldg., (2) along main entrance drive.	Supply water to emergency response vehicles.
SPILL CONTROL EQUIPMENT		
Absorbent	Maintenance Building, Drum Storage Building Drum Sampling Area, Fuel Blending Tanks	contain, absorb, and clean-up spills
Sodium carbonate	Drum Sampling Area, West Drum Bldg. #1	Neutralize acid spills
Open head drums	Drum Storage Building	contain contaminated absorbent
Dikes	All tank farms and drum storage areas	secondary containment
Brooms, shovels	Maintenance Shop, drum storage areas and Equipment Shed	Work with absorbent to contain spills
Portable Pumps	Equipment Shed	transfer liquids

Technical Protocol:

Intra-Plant Transfers Via Tanker Truck

INTRA-PLANT TRANSFERS VIA TANKER TRUCK

1 OVERVIEW

As a normal, integral part of TSDF operation, Romic must move waste from one location to another within its plant. For example, wastes may need to be moved from containers to tanks, from tanks to other tanks, or between tanks and process units. These transfers may be accomplished through various means, including hard piping, flexible hoses, a combination of hard piping and flexible hoses, and/or tanker trucks, as discussed below.

Romic makes use of all of these options. Installing sufficient hard piping to accomplish all transfers would be infeasible and close to impossible. Thus, Romic has used tanker trucks to perform some of these intra-facility transfers for most of its history. The use of tankers for intra-facility transfers is essential for Romic's continued operation. Specifically, the intra-facility transfers accomplished using tanker trucks are:

- Bulking of Containerized Wastes
- Sludge Wasting
- Pumping of Truck Wash Tank
- Removal of Sludge from Tankers
- Removal of Sludge from Tanks
- Collection of Accumulated Precipitation
- Transfer of Fuels from Liquefaction to Fuel Blending Tanks
- Transfers from/to Tanks to/from Process Units
- Transfers While Equipment Is Down
- Spill Response

Each of these transfers is described further below. These transfers may also be accomplished using means other than tanker trucks.

1.1 Bulking of Containerized Wastes

Wastes received by Romic in containers (such as 55-gallon drums) may need to be consolidated and transferred to a storage tank or process unit. Tanker trucks are used for this consolidation and transfer. Romic consolidates waste streams to be managed through fuel blending and aqueous processing in this manner.

1.2 Sludge Wasting

During operation of the biological wastewater treatment system, microorganisms multiply and die. To maintain optimal performance of the system, excess biomass, consisting of live and dead microorganisms, must be removed. Romic will use tanker trucks to remove the excess biomass. The biomass and water removed from the system will either be reprocessed through the aqueous processing system (distillation and subsequent treatment in the biological treatment system) or transferred to the facility's sewer discharge tanks.

1.3 Pumping of Truck Wash Tank

Romic's Truck Wash system cleans out the interior of tanker trucks using water sprayed through a high-pressure spray ball. The initial rinse is emptied into a 1700-gallon polyethylene tank. This tank must be emptied periodically and the contents transferred to a storage tank or process unit.

1.4 Removal of Sludge from Tankers

Tankers containing hazardous waste (received from off-site or intra-plant tankers) are normally unloaded by connecting a flexible hose to a fitting after the valve on the back of the tanker. If there is heavy material (viscous and/or high solids content) in the tanker, it may remain after normal unloading. The most efficient means of removing this heavy material is through the use of a vacuum tanker. Tankers may also be used to remove liquid waste from other tankers in case of equipment problems.

1.5 Removal of Sludge from Tanks

Heavy material, very viscous and/or laden with solids, will, from time to time, accumulate in storage and process tanks. These heavy materials are difficult or impossible to remove using ordinary means. The use of a vacuum tanker is the most feasible means of removing such materials from tanks.

1.6 Collection of Accumulated Precipitation

Rainwater accumulates in containment areas as well as other areas in the plant. While some containment areas are equipped with hard piping, others can only feasibly be pumped using a tanker truck.

1.7 Transfer of Fuels from Liquefaction

The Liquefaction process unit removes viscous and/or solids-laden material from drums. The removed materials are particle-sized and suspended in an organic liquid. The resulting liquid with suspended solids is managed as a hazardous waste derived fuel. The Liquefaction unit includes a 1,000-gallon holding tank for the fuel. The fuel must be transferred from this holding tank to the facility's fuel blending tanks. The Liquefaction unit was originally designed to transfer waste to a tanker truck. The unit is equipped to automatically transfer liquefied fuels to the tanker as it is blended. The unit is equipped with mechanisms to dissipate static charges on the tanker, and to create an oxygen deficient atmosphere within the tanker. The unit is programmed with interlocks that will not allow waste to be transferred to the tanker unless it is grounded and the nitrogen purge cycle has been completed. The facility has (DTSC-approved) plans to install fuel blending tanks near the Liquefaction unit, but current business conditions do not justify the capital expenditure. The only feasible way to transfer the fuel from Liquefaction to Fuel Blending is by tanker truck. The facility has evaluated the idea of installing pumps and hard-piping from the Liquefaction unit to its main fuel blending tanks in Tank Farms B and A. However, such a system would be prone to clogging, and would require a great deal of additional repair and maintenance work.

1.8 Tank-to-Tank, Tank-to-Process Unit, Process Unit-to-Tank Transfers

Material must periodically be transferred between tanks or between tanks and process units. Most of the frequent tank-to-tank and tank-to-process unit transfers occur through a combination of piping, pumps, and flexible hoses, because the facility does not have sufficient hard piping to accomplish such transfers. There are some transfers that need to be accomplished through use of a tanker truck.

1.9 Transfers While Equipment Is Down

Tanker trucks are necessary for use as a contingency in case of equipment breakdown. Equipment breakdown scenarios may involve plugged lines, broken pumps, excess solid accumulation in tanks, or valves in need of repair.

1.10 Spill Response

In case of a spill involving a substantial amount of liquid material, the most effective response will generally entail recovery of as much liquid as possible. This is most easily accomplished for larger spills by using a vacuum truck.

2 DESCRIPTION OF PRACTICE

Tank trucks and tanker trailers are used as conveyances to transfer wastes between units and between containers and units within Romic's facility. Waste or material may be transferred from permitted or nonpermitted units. Hazardous waste will only be transferred to permitted units. Waste will not be stored in tank trucks or tanker trailers. Waste may remain in tank trucks and tanker trailers for a maximum of 24 hours.

2.1 Equipment

The equipment to be used to accomplish intra-plant transfers consists of tank trucks and tanker trailers. These are the same vehicles that are used for over-the-road transportation of hazardous materials. Tank trucks are straight trucks mounted with a liquid-carrying compartment (tank). Tanker trailers are trailer-mounted tanks, and require a power unit (tractor) to move them.

Both tank trucks and tanker trailers may be equipped with liquid pumps to directly pump materials, or pressure/vacuum pumps to create a differential pressure within the interior of the tank. This differential pressure causes the movement of liquid materials into or out of the tank.

Table 1 lists tankers proposed for use as intra-plant transfer vehicles at this time.

2.2 Locations

Tankers to be used for intra-plant transfers will be staged near the source of the waste to be transferred or the destination of the waste. Romic will wait for analytical results, if compatibility testing is necessary, before transferring material to a tank or process unit. During this waiting period, the truck will be monitored (for signs of leakage) and/or parked in an area with full secondary containment (see Section 2.3.2 below).

2.3 Secondary Containment

Romic will provide secondary containment for transfers to and from tankers using either existing bermed areas (i.e., the bay between Tank Farm MNO and Tank Farms R, C, and L, and the bay between Tank Farms R, C, and L, and Tank Farm B) or commercially available temporary secondary containment structures.

The two existing areas currently do not have sufficient capacity to contain the contents of a full 5,000-gallon tanker. The permit renewal application currently under consideration by the Department includes plans for construction to increase the capacity of both areas. For the purposes of this consent order, Romic proposes to determine the capacity of each area as it is currently configured, and limit the volume in any tanker used in this area for intra-facility transfers.

Temporary secondary containment units designed for applications similar to ours are readily available on the commercial market. They are made in a variety of configurations, and constructed of a variety of materials. Romic will select a unit with sufficient secondary containment capacity to contain the contents of an entire tanker, constructed of materials compatible with the hazardous wastes to be transferred.

2.4 Waste Streams

The primary waste streams Romic will transfer using tanker trucks fall under four categories: aqueous wastes contaminated with organic compounds, fuels-type wastes, ethylene glycol/antifreeze, and solvents. Other wastes may be transferred in unusual situations, such as in the case of an equipment breakdown (see §1.9 above) or spill response (see §1.10 above). The three primary waste types are those handled at the Romic facility in bulk.

2.4.1 Aqueous Wastes Contaminated With Organic Compounds

These are wastes containing primarily water, with organic compounds and inert solids. These wastes typical exhibit the following characteristics:

CHARACTERISTIC	RANGE
pH	4–12
Specific gravity	0.9–1.1
Hazardous characteristics	Ignitable, Toxic

Typical composition range for these wastes is as follows:

CONSTITUENT	RANGE
Water	30–75%
Inert solids	0–10%
Oils	0–15%
Nonhalogenated organic solvents[1]	0-50%
Halogenated organic solvents[2]	0-25%
Other organic constituents[3]	0–50%

[1] Nonhalogenated organic solvents include n-methyl pyrrolidone, methanol, isopropanol, butanol, butyl cellosolve, methyl ethyl ketone, methyl isobutyl ketone, acetone, and hexane.

[2] Halogenated organic solvents include dichloromethane and perchloroethylene.

[3] Other organic constituents include gasoline, kerosene, diesel, amines.

2.4.2 Fuels-Type Wastes

These are wastes, predominantly organic in nature, that have BTU content and can be blended into a fuel for use by authorized cement kilns or other boilers and industrial furnaces. They typically exhibit the following characteristics:

CHARACTERISTIC	RANGE
pH	4–12
Specific gravity	0.7–1.2
Hazardous characteristics	Ignitable, Toxic

Typical composition range for these wastes is as follows:

CONSTITUENT	RANGE
Water	10–50%

Inert solids	0–30%
Oils	0–50%
Nonhalogenated organic solvents[1]	0-50%
Halogenated organic solvents[2]	0-20%
Other organic constituents[3]	0–50%

[1] Nonhalogenated organic solvents include n-methyl pyrrolidone, methanol, isopropanol, butanol, butyl cellosolve, methyl ethyl ketone, methyl isobutyl ketone, acetone, and hexane.

[2] Halogenated organic solvents include dichloromethane and perchloroethylene.

[3] Other organic constituents include gasoline, kerosene, diesel, amines.

2.4.3 Used Glycol/Antifreeze

Romic processes waste automotive antifreeze and other spent glycol solutions to recover glycol for reuse/resale. The predominant glycol recycled at Romic is ethylene glycol, the primary active substance in automotive antifreeze. Romic also recycles some triethelyene glycol and propylene glycol, to a lesser extent. Waste antifreeze streams typically exhibit the following characteristics:

CHARACTERISTIC	RANGE
pH	5–9
Specific gravity	1.0–1.1
Hazardous characteristics	Toxic

The waste streams as received are typically 30–50% glycol, 50–70% water, with small amounts (< 5%) of other contaminants and antifreeze additives. Other contaminants include oil and inert solids. Antifreeze additives include corrosion inhibitors and stabilizing agents.

2.4.4 Solvents

These are wastes, predominantly organic in nature, comprised of contaminated and/or partially purified solvents. Contaminants include oil, grease, water, paint pigments, and inert solids. Current predominant solvent lines, their respective chemical compositions (exclusive of contaminants), and characteristics are listed below.

SOLVENTS	CHEMICAL COMPOSITION	SPECIFIC GRAVITY	HAZARDOUS CHARACTERISTICS
Lacquer thinner	Alcohols 0-25% Ketones 10-35% Esters 50-60% Glycol ethers 10-15% Aliphatics 10-20% Aromatics 8-20%	< 1	Ignitable, Toxic
nmp	n-methyl pyrrolidone ~100%	~ 1	Toxic
Acetone	Acetone ~100%	< 1	Ignitable

2.5 Shutdown

At the end of each transfer operation, the operator will "clear the line" by continuing to operate the pump until all lines (hoses and piping) are clear. Valves will be closed in proper sequence to allow material to be removed from the line and to prevent material from flowing back into the line.

3 Controls

3.1 Engineered Controls

Overfill prevention. Vacuum tankers are equipped with a float valve that prevents material from entering the tanker when the liquid level reaches the designated high level.

Material Of Construction, Compatibility With Materials To Be Handled. Tankers to be used for intra-facility transfers will be constructed of carbon steel or stainless steel. Both of these materials are compatible with the organic and aqueous wastes that will be transferred.

Structural Integrity. Tankers used for intra-facility movements will meet US DOT standards for cargo tanks transporting hazardous materials. These tankers will be subject to the ongoing qualification requirements in the US DOT Hazardous Materials Regulations.

Secondary Containment. As noted above in Section 2.3, Romic will use either existing secondary containment structures or temporary secondary containment apparatus sufficient to contain the full volume of a transfer.

Spill Response Equipment. Emergency equipment is located throughout the facility, including (loaded) truck parking areas, and particularly in locations where waste transfers occur. Emergency equipment capabilities and locations are listed in the facility's Contingency Plan, Section VII of the approved Operation Plan.

3.2 Administrative Controls

Twenty-four Hour Limit. Romic will hold waste on intra-facility tankers for no longer than 24 hours during each transfer event. This comports with historical USEPA guidance directed toward recycling facilities that states that, according to some States and Regions, storage permits are not required for holding waste for up to 24 hours prior to recycling.

Compatibility, Contents/Residues. The materials to be transferred, as detailed in section 2.3 above, are generally compatible with each other. However, prior to each transfer, a Romic supervisor or manager will evaluate whether a concern of incompatibility exists. If such a concern exists, then additional steps such as bench scale testing or washing of the tanker will be taken.

Equipment Inspection. Tankers used for intra-facility transfers will be inspected daily. Each inspection will be documented and will cover the following:

INSPECTION ITEM	TYPE OF PROBLEM
Tanker Shell	Damage, corrosion, leak
Pump Motor/Pump	Not operating, leaking; Fluid level low
Vacuum Gauges	Not operating

Float (level) Gauges	Not operating
Valves	Not operating, leaking
Hoses and fittings on truck	Damaged, leaking
Evidence of leaks or spills	Pooled liquids, staining of concrete, dripping liquids, visible vapors

In addition, prior to initiating a transfer, employees will be instructed to locate the appropriate spill control and emergency equipment in the vicinity of the transfer. This emergency equipment is subject to regular documented inspections in accordance with the facility's inspection plan.

TABLE 1. Romic Tankers

D.O.T. RATING	*BOBTAIL TRAILERS*	*UNIT #*	*VIN #*	*LICENSE #*
SATISFACTORY	1998 Peterbilt Bobtail Tanker	BT-4	3BPNL79X4WF465882	5T25441
D.O.T. RATING	***S.S. TRAILERS***	***UNIT #***	***VIN #***	***LICENSE #***
SATISFACTORY	1972 Merit Tank Trailer	S-01	2171	VS9264
SATISFACTORY	1977 West Mark Tank Trailer	S-02	6836	4AY7621
SATISFACTORY	1986 West Mark Tank Trailer	S-04	16WTA1237GC117123	YC9972
SATISFACTORY	1990 West Mark Tank Trailer	S-05	16WTA1233LC122684	1VA6124
SATISFACTORY	1987 West Mark Tank Trailer	S-06	16WTA2234HC118513	1UT5235
D.O.T. RATING	***VAC. TRAILERS***	***UNIT #***	***VIN #***	***LICENSE #***
SATISFACTORY	1971 Thompson Tank Trailer	T-01	TTM878	4AB8229
SATISFACTORY	1974 Thompson Tank Trailer	T-02	TTM934	4DB3494
SATISFACTORY	1984 West Mark Tank Trailer	T-06	16WTS2254EC114479	4CX7317
SATISFACTORY	1987 Thompson Tank Trailer	T-08	1T9TD3925H1068805	1UC3541
SATISFACTORY	1993 Thompson Tank Trailer	T-16	1T9TD3924N1068255	1WM9545
SATISFACTORY	1982 CTM Tank Trailer	T-11	1W9TLS3N6C1021031	4CK9205
SATISFACTORY	1992 ACRO Tank Trailer	T-15	1A9114226N1005085	4CX7086
SATISFACTORY	1994 ACRO Tank Trailer	T-18	1A9114229R1005068	4CV4794
D.O.T. RATING	***BOBTAIL TANKERS***	***UNIT #***	***VIN #***	***LICENSE #***
SATISFACTORY	1995 Peterbilt Tanker	AES-7	1XPMH77X8SM608803	5P45454
SATISFACTORY	1990 Peterbilt Tanker	AES-8	9DWMT7J03LC015414	4C22060
SATISFACTORY	1996 Peterbilt Tanker	AES-10	1XPMH77X2TM609317	CP53565
SATISFACTORY	1991 Peterbilt Tanker	AES-11	9DWXTH9T8MCM00048	4H08763
SATISFACTORY	1991 Peterbilt Tanker	AES-12	9DWXTH9T4MCM00449	4L07058
SATISFACTORY	1996 International Tanker	AES-15	1HTHCAHR9TH389930	5J57319

Technical Protocol

Liquefaction System Changes

LIQUEFACTION SYSTEM CHANGES

The Department alleges that Romic has made changes to its Liquefaction process unit without modifying relevant portions of its Operation Plan. This technical protocol describes the Liquefaction process and process unit as it currently exists and is operated. In order to settle the allegation referred to above, this technical protocol when ratified into a consent order, will serve as the authorization basis for the currently configured Liquefaction system.

The technical protocol takes the form of modified pages in the Operation Plan. The Operation Plan is effectively modified as follows:

- Page XIV-7 revised
- New pages XIV-7a through XIV-7d added
- Page XIV-8 revised
- New Figures E-8, E-8a, and E-8b added

4. Alternative Fuels Blending

One of the most cost effective methods for handling waste solvents is to blend the solvents as a fuel for use in a cement kiln. Alternative fuels may be derived from five possible sources, these include:

i. Still bottoms from the thin film evaporators

ii. Bottoms materials left in reboilers in the fractionation process,

iii. Overhead product from the thin film evaporators,

iv. Incoming wastes which do not require processing,

v. Liquids developed from the liquefaction process.

Wastes from the five sources listed above are blended in agitated tanks. The specific quantities of waste from each source is dependent upon:

1. The BTU value of the waste
2. Viscosity,
3. Chloride content
4. Water content
5. Percent solids

Quality control to meet cement kiln specifications is maintained through extensive analytical testing. The laboratory analyzes each waste stream to be blended and specifies the quantities from each source which will result in a suitable fuel. Once blended the solvent mixture is again tested to confirm the composition and compliance with the required specifications set forth by the cement kiln.

5. Liquefaction

Liquefaction is the process at Romic that liquefies sludges and other residues that remain in drums in a manner that ensures the drum is emptied and cleaned.

Waste Types

All waste material processed in the liquefaction system must have sufficient heat and/or organic content. Waste types that are typically processed in the liquefaction system are paint sludges, waxes, greases, contaminated absorbent, and other RCRA sludges. Typical RCRA waste codes to be managed in these units include F001, F002, F003, F004, F005, D001, D004-D011, D018, D019, D021-D030, D032-D036, D038-D040, and D043.

Storage Prior to Processing

Prior to processing in the Liquefaction Unit, waste materials will be stored within the originally received container (such as a 55-gallon drum). Such containers may meet the definition of RCRA-empty but would probably not meet the California definition of empty in 22 CCR 66261.7. The containers will be stored in authorized waste storage areas prior to being staged near the Liquefaction process. Wastes to be managed through liquefaction received in containers other than 55-gallon steel drums may be repackaged into 55-gallon steel drums.

Processing Equipment Used

The processing equipment for Liquefaction is shown in the table below:

UNIT NAME	MAJOR COMPONENTS (vessel capacity in gallons)	LOCATION1	ANCILLARY EQUIPMENT
Liquefaction	Liquefaction Enclosure and Shredder	Drum and Debris Processing Building	VOC system, raw material feed rollers, cyclone separator, fire suppressant system, drum de-header, pumps, and transfer hoses
	Second and Third stage Grinders	(same)	
	Tank PT-1 (1,160)	(same)	

The piping and instrumentation diagram for the Liquefaction process system is shown in the figure, Drum Liquefaction System, Piping & Instrumentation Diagram.

Liquefaction Process Description

A process flow diagram for liquefaction is provided in Figure E-8. A piping and instrumentation diagram (P&ID) illustrating the apparatus is provided in Figure E-8a (revision date 12-03).

Liquefaction is an important recycling step at Romic. The process treats containers to remove sludges and other residues so that the container can meet the classification as an empty container. The containers are cleaned so that they can be reconditioned off-site or further processed on-site before being recycled as scrap metal. The recovered sludges are recycled as hazardous waste fuel after Fuel Blending.

This process liquefies sludges that originate from a variety of sources. Many drums shipped to Romic contain significant amounts of sludge, which may settle to the bottom of drums. Drums that contain sludge are typically pumped to remove free liquids. Once the free liquids are removed, the drum is moved to the liquefaction area for further waste removal and processing. The Liquefaction Unit can also handle full drums of materials that may otherwise be difficult to remove.

For open-top drums the lid is simply removed by an operator. Bung-top or closed-head drums require that the head be cut off the drum by an operator using non-sparking tools. Once the head is removed, the sludge is mechanically removed from the drum using an

auger and/or a hydraulic scraping blade. In some instances both ends of the drum may be removed to remove sludge.

After the head of the drum is removed, it is placed into the enclosed drum cleaning system. The drum is held in place by a mechanical assembly during the automated cleaning process. Wiper blades are first inserted into the drum to scrape residues from the drum surface. The scraping is assisted by a light solvent, such as light product, that is recovered in certain distillation operations, such as the distillation of wastewater. After the scraping cycle, brushes are automatically placed into the drum and moved across the inner surface of the drum to clean it. The cleaning action is assisted by diesel that is injected into the drums.

During both the scraping and brushing cycles, any solids in the drum that are removed fall into the integral solids shredder assembly located beneath the drum enclosure. The shredder reduces the size of any solids until they can pass through a screen. Some of the material (solid/semi-solid) rejected by the screen is pumped to a separator and subsequently to a 55-gallon steel drum. This steel drum will be processed through liquefaction. A nitrogen purge is used to enhance safety by serving to suppress fires. The liquid and solids that pass through the coarse shredder go through a three stage grinding process to progressively reduce the particle size. After the final grinding stage, the liquid and small solids are pumped to the product tank, PT-1, which has an internal mixer. The waste solids are pumped through another grinder to further reduce particle size before being placed in a yard tanker for transfer to the Fuels Blending System. The transfer of PT-1 to the Fuels Blending System may also be by hard-piped connections.

A vapor recovery system is used to recover solvent/diesel vapors from the Liquefaction Enclosure and shredder/grinder equipment. This system is further discussed below. The system includes a condenser, diesel scrubber, and activated carbon.

An emulsifying agent may be added to the product tank to help maintain the solids in suspension. After thorough mixing, the liquid in the circulation tank is sent to the Fuel Blending process.

The Liquefaction process was originally designed to transfer the liquefied fuels to a tanker truck parked in the area just south of the process system. Romic plans to install fixed storage tanks in close proximity to the process system. Until these tanks are constructed, Romic will continue to use tanker trucks to transfer material from the liquefaction process to fuels blending tanks elsewhere in the facility.

A tanker truck, preferably one equipped with internal agitation, is parked in the area south of the Liquefaction process. Operators connect a flexible hose between the tanker and a fitting that is piped to the Liquefaction Product Tank (PT-1). The tanker is then grounded, and any static differential allowed to dissipate. The nitrogen purge cycle on the Liquefaction process is initiated, inerting the atmosphere within the tanker. Liquefied fuels are pumped from PT-1 to the tanker truck by a pump that activates, either automatically or manually, when the contents in PT-1 reach a preset level.

Management of Residuals

The Liquefaction Process generates some residual materials as described above. These waste residuals and their usual disposition are:

- Empty Clean Drums – Drums exiting the Liquefaction Process are now empty in accordance with Federal and California regulations and are excluded from further hazardous waste regulation. They are sent for reconditioning (if the drum is in good condition) or scrap metal recovery.
- Liquefied Sludge/Solids – Liquefied sludge/solids is recycled for fuel value through use of the on-site Fuels Blending system, which produces a hazardous waste fuel that is shipped off-site for combustion by cement kilns or other licensed boilers or industrial furnaces.
- Diesel –Diesel from the Liquefaction vapor recovery system is recycled for fuel value through the on-site Fuels Blending process.
- Activated Carbon – Activated carbon from the vapor recovery system will be either sent off-site for recycling or managed on-site in a DTSC authorized waste management unit.

Process Rate

The maximum treatment capacity of the Liquefaction System is 400 drums/day.

Air Emissions and Controls

Regulatory Applicability

The tanks associated with the liquefaction process are subject to the requirements of Article 28.5 (of Chapter 15 of Title 22 of the California Code of Regulations). As such they are equipped with appropriate controls. These tanks manage hazardous wastes below the vapor pressure levels specified in § 66265.1084(b)(1)(A). These tanks are vented through a closed-vent system to a control device that includes a venturi scrubber, nitrogen-cooled condenser, and two carbon canisters. This air emission control system is depicted in Figure E-8b (revision date 12-03). The tanks are maintained closed except when adding or removing waste.

Safety Measures for the Liquefaction Process

In addition to the normal systems in place to handle ignitable waste, the Romic Facility's Liquefaction System utilizes additional fire protection systems to prevent the ignition of ignitable waste. The following summarizes the protective systems used in the Liquefaction System.

System Grounding

The Liquefaction System steel structure is bonded to the building, which, in turn, is grounded to reduce sparking potential.

Nitrogen Purge During Operation

During the operation of the Liquefaction System, drums are placed in the dumping chamber and the oxygen content of the atmosphere within the chamber is reduced through the addition of nitrogen. The addition of nitrogen produces an atmosphere that will not support combustion if a spark were to be created during the drum emptying process. The control of the air emissions from the dumping chamber is enhanced with a venturi that creates a slight vacuum within the system. The displaced vapors and air are

processed in a pollution control system described in Romic's BAAQMD Permit. In summary, the abatement equipment scrubs the vapors using a venturi type scrubber with diesel. The vapors are then chilled with condensed vapors collected and returned to the liquefaction system. Non-condensed gases are finally passed through two carbon drums in series. In addition, nitrogen is introduced into the product blend tank where the final mixing is conducted prior to discharge to a tanker.

Nitrogen Purge During Shutdown

When the Liquefaction System is not in operation, nitrogen will be introduced into the drum-dumping chamber and the blended product tank. Nitrogen will flow only if the system is off and the doors to the drum-dumping chamber are closed. The nitrogen is introduced at an approximate rate of 30 - 60 cubic feet per hour.

Tanker Loading

Once the Liquefaction System has produced a liquefied fuel through the grinding, shredding and resuspension processes, the fuel is ready for transfer to a yard tanker truck. Prior to initiating a transfer, the truck will be purged with nitrogen to produce an inert atmosphere. The tanker truck is grounded to allow any static charges to be dissipated.

Unless the nitrogen purge process is completed, the discharge pump from the blend tank will not operate. In addition, the pump cannot be activated until the nitrogen flow switch and associated timer detects 10 minutes of flow of nitrogen. Once the nitrogen flow has been completed, the system will allow the discharge pump to be activated.

6. Drum Rinsing/Decontamination

While not a RCRA regulated activity, Romic believes that the drums considered empty as per the definition in 40 CFR 261.7 still represents a potential hazard to the environment and must be properly managed as specified by California regulations.

Drums are decontaminated in one or more of the following manners.

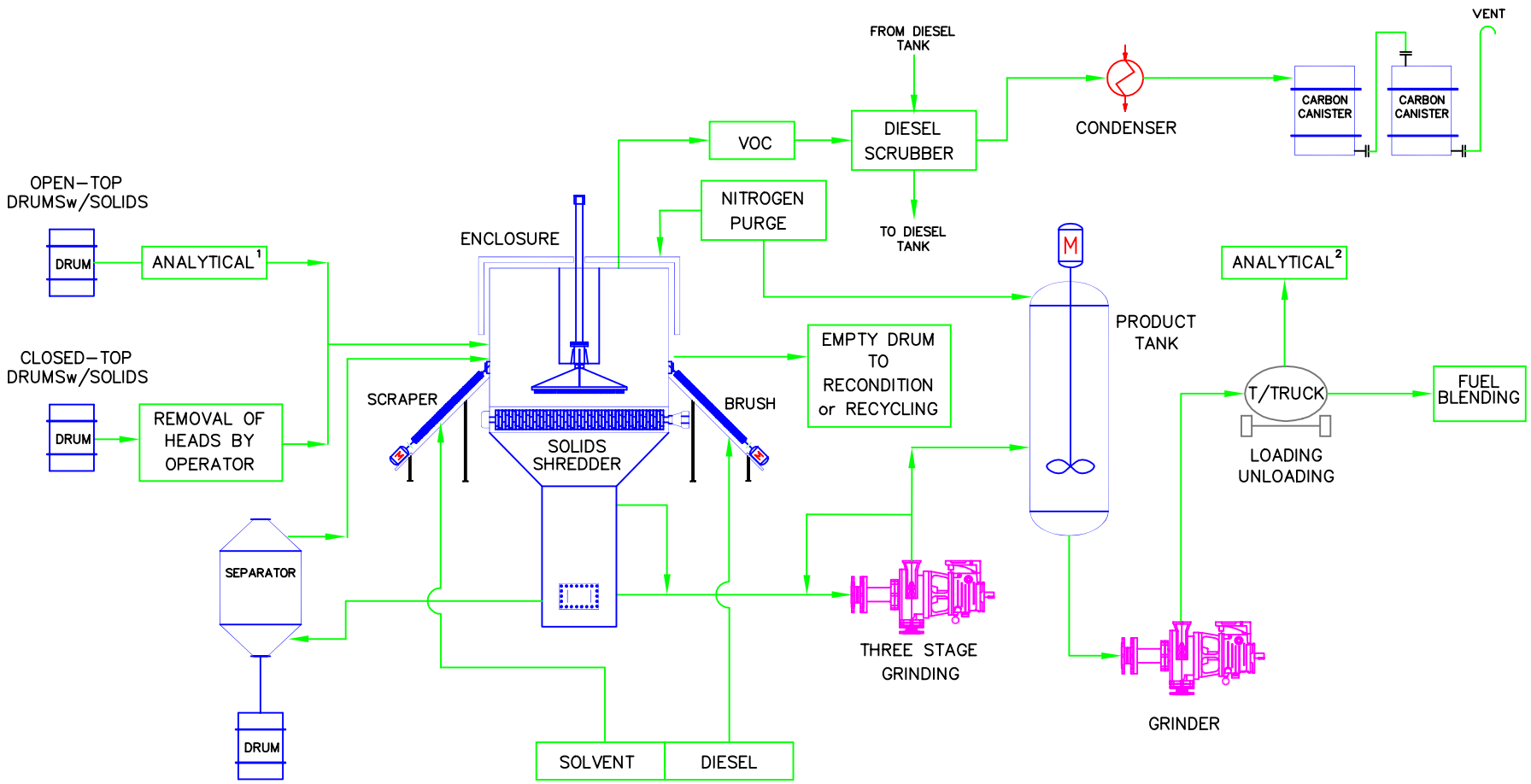
a. The drums may be pressured washed with water,

b. The drums may be pressured washed with a solvent,

c. The drums may be caustic washed.

The three systems described above are similar in design in that the wash solvent is continually recycled until it is no loger effective as a decontaminating solution. At that point it is processed in one of the appropriate treatment units located on site.

LIQUEFACTION



FOOTNOTES

1. For acceptance analysis requirements see Waste Analysis Plan
2. BTU, pH, PCB's

REV	DATE	REVISION	APP

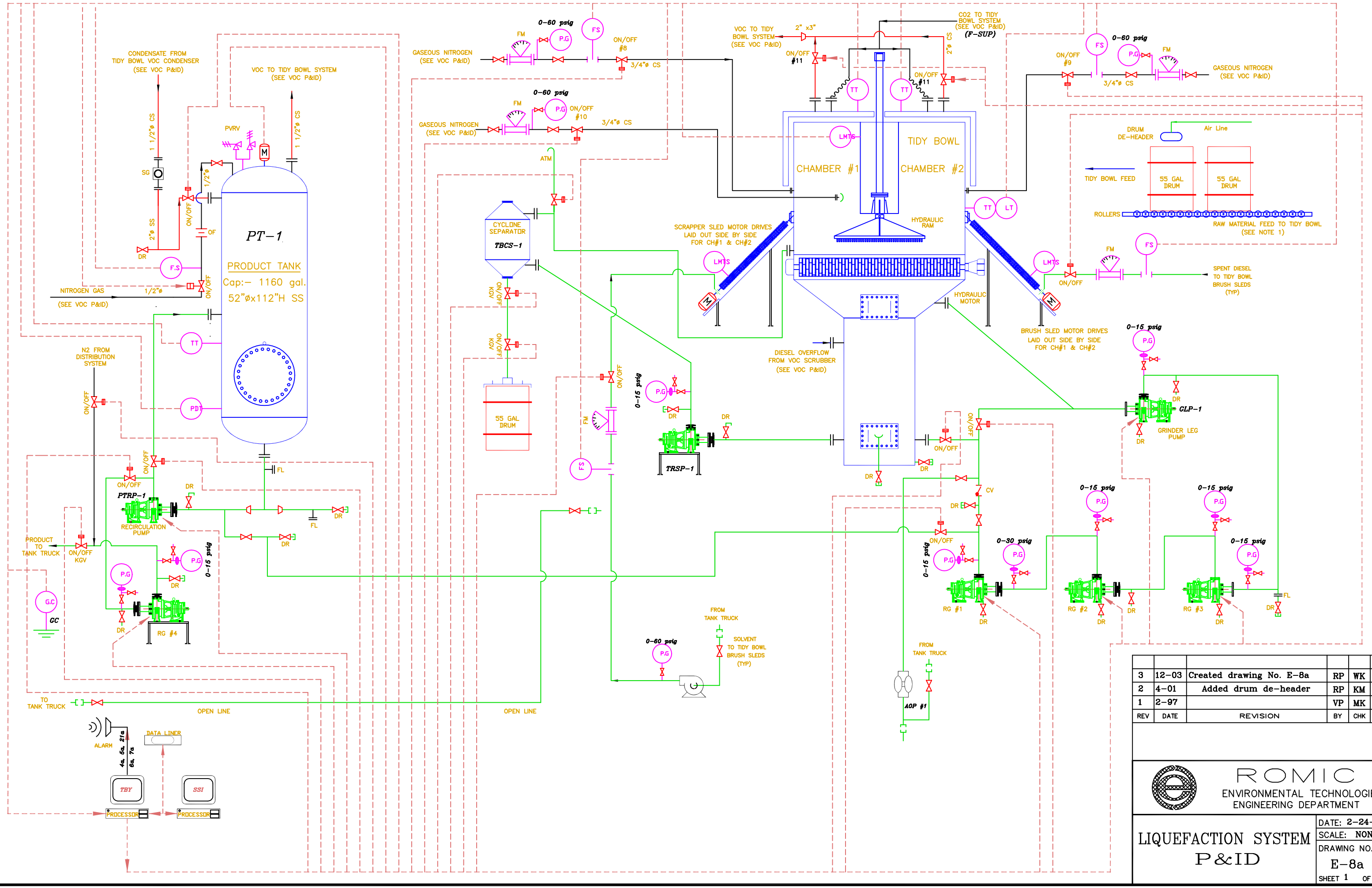
DRAWN BY: ROBERT PIGNATTI

ROMIC
ENVIRONMENTAL TECHNOLOGIES
ENGINEERING DEPARTMENT

LIQUEFACTION
FLOW DIAGRAM

DATE: 7-26-01
SCALE: NONE
DRAWING NO.
E-8

I:\COMMON\PART-B-2000\PROCESS FLOW DIAGRAMS\ E-8 Consent Order



REV	DATE	REVISION	BY	CHK	APP
3	12-03	Created drawing No. E-8a	RP	WK	KM
2	4-01	Added drum de-header	RP	KM	
1	2-97		VP	MK	

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ENGINEERING DEPARTMENT

LIQUEFACTION SYSTEM P&ID

DATE: 2-24-97
SCALE: NONE
DRAWING NO. E-8a
SHEET 1 OF 1

R:\COMMON\PART-B 2000\P &ID\LIQFESYSTEM

TO PLC.

ALARM

TBT

SSI

PROCESSOR

PROCESSOR

14, 18

DEFROSTER CYCLE START/STOP BUTTON

1"H2O

LCD DISPALY METER

0-80" H2O

1

-20°F

LCD DISPALY METER

(-80+60° C)

2

1"H2O

LCD DISPALY METER

0-80" H2O

3

PDT#1

-20°F

LCD DISPALY METER

(-80+60° C)

4

1/2"ø SS

1/2"ø SS

Manometer

DEFROST CYCLE

DEFROST CYCLE

DEFROST CYCLE

DEFROST CYCLE

(I/P) 4a

DEFROST CYCLE

2a, DEFROST CYCLE

DEFROST CYCLE

3"ø SS

12"

3"ø SS

0-100° C

T.G

RTD#2

set @ 60° F TO STOP DEFROST CYCLE

N2 TO ATM.

PCV SET @ 25 psig

RTD#1

set @ 20° F

N2 VAPOR FOR BLANKETING USE (TIDY BOWL/SSI SYSTEM).

3"ø SS

4" x3"

ON/OFF #6 NO

SAMPLING PORTS

VOC's FROM TIDY BOWL/ SSI SYSTEM.

DEFROST CYCLE

ON/OFF #2 NC

2" x3"

SP

3"ø SS

30 GAL Capacity

3"ø SS

4"ø SS

1 1/2"ø Galvanized

4" x3"

SECONDARY CONDENSER

CONDENSER (201 FT2)

SEE NOTE 1

ON/OFF #3 NC

2" x3"

6"ø x8"H ME

3"ø SS

SEPARATOR 55 GAL DRUM

316-SS

1"ø SAMPLE

DR 1"ø

4"ø CLEAN OUT

SAMPLING PORTS

VENT

SP

SP

N2 + O2 TO ATM.

ACTIVATED CARBON CANNISTER

30"ø x42"H

FLAME ARRESTOR

ACTIVATED CARBON CANNISTER

30"ø x42"H

0-100 psig

P.G

NITROGEN TANK

(I/P) 4a

4" x1/2"

CV#2 1/2"NPT

2" x1/2"

FL

SG

1 1/2"ø CS

ON/OFF #4 NCO

SV

9'

1 1/2"ø SS

TO VENTURI SCRUBBER

1 1/2"ø SS

-200+50°C

T.G

RTD#3

1 1/2"ø SS

2"ø SS

3"ø SS

PRIMARY CONDENSER

SEE NOTE 1

2'

ON/OFF #5 NO

SV

1"ø SS

C#1

PRODUCT TANK

2a, DEFROST CYCLE

150 SCFH

VAPORIZER 6500 SCFH MAWP= 275 psig

TO EXISTING BLOWER SYSTEM

1 1/2"ø SS

LIQUID NITROGEN

SG

1"ø CS

2'

1"ø SS

1"ø SS

0-100 psig

P.G

ON/OFF #1 NO

(I/P) 1a

N2 VAPOR TO ATMOSPHERE

CV#1

PCV SET @ 20 psig

ELECTRICAL TRACE HEATING

2"ø SS

START/ STOP

NON SPARKING BLOWER #1

2"ø SS

ELECTRICAL TRACE HEATING

2"ø SS

N2 VAPOR FOR BLANKETING USE (TIDY BOWL/SSI SYSTEM).

COMMOM/PART-BB/P061-1.DWG/9-25-97

NOTES

1.) CONDENSERS TO BE INCLINED BY 2'.
SO LEFT SIDE WILL BE HIGHER THAN RIGHT SIDE BY 5".

REV	DATE	REVISION	BY	CHK	APP
7	12-03	Created drawing No. E-8b	RP	WK	KM
6	9-97	ADDED PCV ON N2 TO ATM	VP	MK	
5	9-97	VOC SYSTEM As Built	JB	MK	
4	8-97	VOC SYSTEM MODERNIZATION	VP	MK	
3	11-96		VP	MK	
2	10-96		VP	MK	

MODERNIZATION OF SHREDDER & LIQUEFACTION VOC CONTROL ABATEMENT SYSTEM.

ROMIC
ENVIRONMENTAL TECHNOLOGIES ENGINEERING DEPARTMENT

SHREDDER & LIQUEFACTION VOC SYSTEM MODERNIZATION

DATE: 2-3-99
SCALE: NONE
DRAWING NO. E-8b
SHEET 1 OF 1